

IN THE US PATENT AND TM OFFICE

Ser. Num. 09/882,826  
Appn. Filed 06/16/2001  
Applicant: Che-Chih Tsao  
Appn. Title Pattern Projection Techniques for Volumetric 3D Displays and 2D displays  
Examiner: Fatahiyar, Mahmoud  
Grp Art Unit 2674

Commissioner of Patents and Trademarks  
Washington, District of Columbia 20231

**RECEIVED**  
SEP 15 2004  
Technology Center 2600

Date submitted: Sep. 7, 2004

QUESTIONS ABOUT STATUS OF DISCLOSURE DOCUMENTS FILED AT PTO

Sir,

Under the Disclosure Document Program (DDP) of PTO (see Attachment 1: DDP description printout from PTO web-site), a number of Disclosure Documents related to this current application were filed at PTO before the filing of this current application. At first filing of this current patent application, before the 2-year expiration dates of those Disclosure Documents, a Disclosure Document Reference Letter (see Attachment 2: copy of the filed letter) was filed together with the current application to request PTO to retain and reference those documents to the current application. According to the DDP description (see Attachment 1, p. 4 top), PTO should respond with an acknowledgment letter in the next official communication. However, the first official communication does not contain such an acknowledgment letter. Applicant therefore sending this letter to inquire:

1. The current status of those referred Disclosure Documents on file at PTO. Are they still on file? Can they be retained and referenced to this current application?
2. In case there was any change of the DDP, when was the change? What's the new description? (Please note that the PTO web-site printout is current.)

Please also take note that although those documents do not help the current application in priority claim, they do support the date of conception, which could be important in challenging

competitors. For example, if a competitor filed a patent on some of the same subject matters before this current application but after Applicant's Disclosure Document dates, then the Disclosure Documents on file at PTO can be used to render the competitor patent invalid, as a simple matter.

Very respectfully,

Signed: 

Applicant: Che-Chih Tsao

C/O: ACT Research Corporation

16 Walnut St., #43 Arlington MA 02476

(Phone/Fax) 781-646-3587

Attachments: as described, 8 pages attached

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A service provided by the United States Patent and Trademark Office (USPTO) is the acceptance and preservation for two years of "Disclosure Documents" as evidence of the date of conception of an invention. ←

A paper disclosing an invention (called a Disclosure Document) and signed by the inventor or inventors may be forwarded to the USPTO by the inventor (or by any one of the inventors when there are joint inventors), by the owner of the invention, or by the attorney or agent of the inventor(s) or owner. The Disclosure Document will be retained for two years, and then be destroyed unless it is referred to in a separate letter in a related nonprovisional patent application filed within those two years.

**THE DISCLOSURE DOCUMENT IS NOT A PATENT APPLICATION. THE DATE OF ITS RECEIPT IN THE USPTO WILL NOT BECOME THE EFFECTIVE FILING DATE OF ANY PATENT APPLICATION SUBSEQUENTLY FILED.**

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This program does not diminish the value of the conventional, witnessed, permanently bound, and page-numbered laboratory notebook or notarized records as evidence of conception of an invention, but it should provide a more credible form of evidence than that provided by the mailing of a disclosure to oneself or another person by registered mail.

**Content of the Disclosure Document**

The benefits afforded by the Disclosure Document will depend directly upon the adequacy of the disclosure. It is strongly recommended that the document contain a clear and complete explanation of the manner and process of making and using the invention in sufficient detail to enable a person having ordinary knowledge in the field of the invention to make and use the invention. When the nature of the invention permits, a drawing or sketch should be included. The use or utility of the invention should be described, especially in chemical inventions.

**Preparation of the Disclosure Document**

A standard format for the Disclosure Document is required to

facilitate the USPTO's electronic data capture and storage. The Disclosure Document (including drawings or sketches) must be on white letter-size (8.5 by 11 inch) or A4 (21.0 by 29.7 cm) paper, written on one side only, with each page numbered. Text and drawings must be sufficiently dark to permit reproduction with commonly used office copying machines. Oversized papers, even if foldable to the above dimensions, will not be accepted.

Attachments such as videotapes and working models will not be accepted and will be returned.

### **Other Enclosures**

The Disclosure Document must be accompanied by a separate cover letter signed by the inventor stating that he or she is the inventor and requesting that the material be received under the Disclosure Document Program. The inventor's request may take the following form:

**"The undersigned, being the inventor of the disclosed invention, requests that the enclosed papers be accepted under the Disclosure Document Program, and that they be preserved for a period of two years."**

A Disclosure Document Deposit Request form (PTO/SB/95) can also be used as a cover letter. This form is available at the USPTO Web site at <http://www.uspto.gov> or by calling the USPTO General Information Services Division at 800-786-9199 or 703-308-4357.

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### **WARNINGS to Inventors**

The two-year retention period is not a "grace period" during which the inventor can wait to file his or her patent application without possible loss of benefits. It must be recognized that, in establishing priority of invention, an affidavit or testimony referring to a Disclosure Document must usually also establish diligence in completing the invention or in filing the patent application after the filing of the Disclosure Document.

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The information in this brochure is general in nature and is not meant to substitute for advice provided by a patent practitioner. Applicants unfamiliar with the requirements of US patent law and procedures should consult an attorney or agent registered to practice before the USPTO.

A list of the *Attorneys and Agents Registered to Practice Before the US Patent and Trademark Office* can be viewed and searched at the USPTO Web site at <http://www.uspto.gov/> and examined without charge at Patent and Trademark Depository Libraries (PTDLs). The USPTO General Information Services Division will provide a list of names of attorneys and agents for a particular city or zip code for customers without Web access. Call 800-786-9199 or 703-308-4357. The list is available for purchase on DVD-ROM from the USPTO by calling 703-306-2600.

A print publication of the *Attorneys and Agents Registered to Practice Before the US Patent and Trademark Office* is available from the US Government Printing Office at the following address:

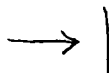
Superintendent of Documents (SuDocs)  
P. O. Box 371954  
Pittsburgh, PA 15250-7954

For information or to order by telephone, call 202-512-1800. The SuDocs Web site is at [www.access.gpo.gov/su\\_docs/](http://www.access.gpo.gov/su_docs/).

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## **Disposition**

The Disclosure Document will be preserved in confidence by the USPTO for two years after its receipt without publication in accordance with 35 U.S.C. 122(b) effective November 29, 2000. It will be destroyed unless it is referred to in a separate letter in a related patent application filed within the two-year period. The separate letter filed in the related patent application must identify not only the patent application, but also the Disclosure



→ Document by its title, number, and date of receipt in the United States Patent and Trademark Office. Acknowledgment of such letters will be made in the next official communication or in a separate letter from the USPTO.

### **Fee**

A fee of \$10.00 in the form of a check or money order made payable to "Commissioner for Patents" must accompany the Disclosure Document when it is submitted to the U. S. Patent and Trademark Office. Documents without the full fee will be returned.

Applicants can request a copy of their Disclosure Document as filed in the United States Patent and Trademark Office if they are the original submitter of the document. The request must be made in writing and accompanied by a fee of \$25.00.

Fees are subject to change annually. To confirm current fees, USPTO General Information Services (GIS) Customer Representatives can be reached from 8:30 a.m. to 8:00 p.m. Eastern Time, Monday through Friday (except Federal holidays) by calling 800-786-9199 or 703-308-4357. The GIS fax number is 703-305-7786 and the TTY is 703-305-7785. Find the **current fee schedule** and other information about the USPTO at <http://www.uspto.gov/>.

### **Mailing Address**

Mail the Disclosure Document with payment to:

**Mail Stop DD  
Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450**

### **Provisional Application for Patent**

Inventors also have the option of filing a **Provisional Application for Patent**. View information about this related service at the **USPTO Web site** or request a print brochure by calling 800-786-9199 or 703-308-4357.

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The **Texas Intellectual Property Partnership (TIP2)** at **Texas A & M University at College Station** participates as USPTO's authorized "agent" in accepting documents filed under the Disclosure Document Program. This service provides a completed transaction on-site. Documents receive an identifying number and date at the time of receipt by the PTDL. Original documents are sent to the USPTO for processing and retention.

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Texas A & M University Libraries**

**Sterling C. Evans Library Annex - MS 5000**  
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**Patent and Trademark Depository Libraries** are listed in the Official Gazette and at the USPTO Web site. Patents and patent-related reference materials are available at the nationwide network of PTDLs. Contact a PTDL prior to your visit to learn about its collections, services, and hours.

## Contacts

The **Inventors Assistance Center (IAC)** provides patent information and services to the public. The IAC is staffed by former Supervisory Patent Examiners and experienced Primary Examiners who answer general questions concerning patent examining policy and procedure.

Mail for the **Inventors Assistance Center** including complaints about Invention Promoters may be sent to:

**Mail Stop 24**  
**Director of the U.S. Patent and Trademark**  
**Office**  
**P. O. Box 1450**  
**Alexandria, VA 22313-1450**

Telephone: 800-786-9199  
Fax: 703-306-5570  
E-mail: [independentinventor@uspto.gov](mailto:independentinventor@uspto.gov)

For additional copies of this brochure, or for further information, contact the USPTO General Information Services Division.  
Telephone: 800-PTO-9199  
Fax: 703-305-8825  
TTY: 703-305-7785

or return to USPTO's home page at <http://www.uspto.gov/>.

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Last Modified: 04/30/2004 14:01:27





**In the United States Patent and Trademark Office**

Serial Number:  
Appn. Filed:  
Applicant(s): Che-Chih Tsao  
Appn. Title: Pattern Projection Techniques for Volumetric 3D Displays and 2D Displays  
Examiner:  
Group Art Unit:

Mailed: \_June 16, 2001 USPS Express Mail \_

At: \_\_Arlington MA\_\_

**Disclosure Document Reference Letter**

Date: 6/16/1997

Commissioner of Patents and Trademarks  
Washington, District of Columbia 20231

Sir:

Disclosure documents as identified below were previously filed in the Patent and Trademark Office. As these disclosures relate to the above patent application, applicant(s) request that these Disclosure Documents be retained and referenced to the above application.

Disclosure Document Title: Volumetric Pointing and Display system for complex 3D interactions and for computer aided design engineering

Disclosure Document Number: 457938

Disclosure Document Filing Date: 990618

Disclosure Document Title: Software correction scheme to image position error for VID

Disclosure Document Number: 458009

Disclosure Document Filing Date: 990618

Disclosure Document Title: Methods and Apparatus of Image Projection for 3D Volumetric Displays

Disclosure Document Number: 461839

Disclosure Document Filing Date: 990909

Disclosure Document Title: Free-pixel projection Methods and Apparatus for 3D Volumetric Display and 2D Display

Disclosure Document Number: 461733

Disclosure Document Filing Date: 990908

Disclosure Document Title: Image Projection Method for Volumetric 3D Displays and 2D Displays  
Disclosure Document Number: 462217  
Disclosure Document Filing Date: 990915

Disclosure Document Title: Method and Apparatus for color and gray Volumetric 3D Display  
Disclosure Document Number: 467804  
Disclosure Document Filing Date: 000119

Disclosure Document Title: Vector Data Transfer Schemes for Volumetric 3D Display Data  
Transfer and other Similar Data  
Disclosure Document Number: 470603  
Disclosure Document Filing Date: 000310

Disclosure Document Title: Illumination, Projection, and Screen Techniques for 3D volumetric  
Display and 2D Displays  
Disclosure Document Number: 478153  
Disclosure Document Filing Date: 000808

Disclosure Document Title: Sub-panel Illumination and Merging for Volumetric 3D Displays and  
2D Displays  
Disclosure Document Number: 491563  
Disclosure Document Filing Date: 010404

Very Respectfully,



Che-Chih Tsao

16 Walnut St., #43  
Arlington MA 02476  
781-646-3587

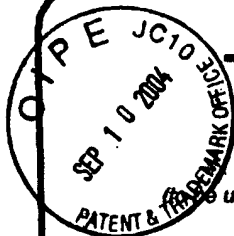
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PTO/SB/21 (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

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# TRANSMITTAL FORM

Use this form for all correspondence after initial filing)

Application Number	09/882,826
Filing Date	06/16/2001
First Named Inventor	Tsao, Che-chih
Group Art Unit	2674
Examiner Name	Fatahiyar, Mahmoud
Attorney Docket Number	

Total Number of Pages in This Submission

## ENCLOSURES (check all that apply)

☒ Fee Transmittal Form PTO-2038

☐ Fee Attached

☒ Amendment / Reply (22 page)

☐ After Final

☐ Affidavits/declaration(s)

☒ Extension of Time Request (1 page)

☐ Express Abandonment Request

☒ Information Disclosure Statement (3 pages + 7 documents)

☐ Certified Copy of Priority Document(s)

☐ Response to Missing Parts/ Incomplete Application

☐ Response to Missing Parts under 37 CFR 1.52 or 1.53

☐ Assignment Papers (for an Application)

☐ Drawing(s)

☐ Licensing-related Papers

☐ Petition

☐ Petition to Convert to a Provisional Application

☐ Power of Attorney, Revocation Change of Correspondence Address

☐ Terminal Disclaimer

☐ Request for Refund

☐ CD, Number of CD(s) \_\_\_\_\_

☐ After Allowance Communication to Group

☐ Appeal Communication to Board of Appeals and Interferences

☐ Appeal Communication to Group (Appeal Notice, Brief, Reply Brief)

☐ Proprietary Information

☐ Status Letter

☒ Other Enclosure(s) (please identify below):

Letter of Questions on status of Disclosure Documents (10 pages)

Remarks

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## SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name

CHE-CHIH TSAD

Signature

*Che-chih Tsao*

Date

Sep. 7, 2004

## CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, Washington, DC 20231 on this date: Sep. 7, 2004

Typed or printed name

CHE-CHIH

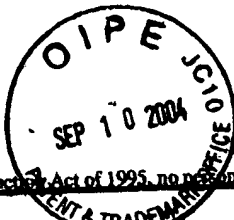
Signature

*Che-chih Tsao*

Date

Sep. 7 2004

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# PATENT APPLICATION FEE DETERMINATION RECORD

Application or Docket Number

09/882,826

## CLAIMS AS FILED - PART I

(Column 1)

(Column 2)

FOR	NUMBER FILED	NUMBER EXTRA
BASIC FEE (37 CFR 1.16(a))		
TOTAL CLAIMS (37 CFR 1.16(c))	minus 20 =	*
INDEPENDENT CLAIMS (37 CFR 1.16(b))	minus 3 =	*
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(d))		

SMALL ENTITY

OR  
OTHER THAN  
SMALL ENTITY

RATE	FEE
	\$
x \$	=
x	=
+	=
TOTAL	

RATE	FEE
	\$
x \$	=
x	=
+	=
TOTAL	

\* If the difference in column 1 is less than zero, enter "0" in column 2

## CLAIMS AS AMENDED - PART II

(Column 1)

(Column 2)

(Column 3)

AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total (37 CFR 1.16(c))	* 26	Minus	** 20	= 6
Independent (37 CFR 1.16(b))	* 5	Minus	*** 3	= 2
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(d))				

SMALL ENTITY

OR  
OTHER THAN  
SMALL ENTITY

RATE	ADDITIONAL FEE
x \$ 9	= 54
x 43	= 86
+ 0	= 0
TOTAL	140

RATE	ADDITIONAL FEE
x \$	=
x	=
+	=
TOTAL	

(Column 1)

(Column 2)

(Column 3)

AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total (37 CFR 1.16(c))	*	Minus	**	=
Independent (37 CFR 1.16(b))	*	Minus	***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(d))				

RATE	ADDITIONAL FEE
x \$	=
x	=
+	=
TOTAL	

RATE	ADDITIONAL FEE
x \$	=
x	=
+	=
TOTAL	

(Column 1)

(Column 2)

(Column 3)

AMENDMENT C	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total (37 CFR 1.16(c))	*	Minus	**	=
Independent (37 CFR 1.16(b))	*	Minus	***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(d))				

RATE	ADDITIONAL FEE
x \$	=
x	=
+	=
TOTAL	

RATE	ADDITIONAL FEE
x \$	=
x	=
+	=
TOTAL	

- \* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
  - \*\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
  - \*\*\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
- The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

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